

Colorado Basin Outlook Report June 1, 2004



Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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COLORADO WATER SUPPLY OUTLOOK REPORT JUNE 1, 2004

Summary

A warm and dry weather pattern prevailed across Colorado during May. Snowmelt continued nearly unimpeded throughout the month, and by June 1 most of the state's snowpack had nearly melted out for the year. While reservoir storage levels exceed those of last year nearly statewide, those volumes remain well below average across much of the state. Summer water demands are expected to take a toll on reservoir storage because expected runoff is below average across most of the state. Streamflow forecasts across northern Colorado are extremely poor, continuing drought concerns for water users in these basins.

Snowpack

The warm and dry weather pattern that gripped the state during May produced rapid melting of an already below average snowpack. By June 1, statewide snowpack totals had dropped to only 23% of average and were only 69% of last year's readings on this date. Snowpack percentages are extremely poor across the state, and range from a low of only 13% of average in the South Platte basin to a high of 40% of average in the North Platte basin. In comparison to last year, the current readings are more than two times last year's totals in the Rio Grande and combined San Juan, Animas, Dolores, and San Miguel basins. The Gunnison basin is the only other basin reporting a greater snowpack than last year, at 123% of the 2003 totals. Elsewhere across the state, this year's June 1 snowpack is well below last year's. In the South Platte basin, which benefited the most from the March blizzard of 2003, this year's snowpack is only 21% of last year's June 1 snowpack. Several factors are contributing to these low snowpack percentages: this winter's below average accumulation provides less water equivalent to melt, May's warm temperatures have produced a rapid melt out of the existing snowpack, and a lack of additional snowfall in May brought no improvement to snowpack totals. While these low snowpack percentages cause concern for water users, they can at least be somewhat relieved that the most important factor in determining runoff volumes is the seasonal maximum accumulation. While this year's seasonal maximums were below average and were reached earlier than average, they're certainly well above the June 1 percentages. This year's snowpack, which reached peak accumulations nearly a month early, is also expected to completely melt out about a month early. It's anticipated that all of Colorado's SNOTEL sites will be melted out by mid-June this year.

Precipitation

May's precipitation, measured at Colorado's mountain SNOTEL sites, was a disappointing 37% of average. All of the major river basins reported well below average totals for the month. The lowest totals, as a percent of average, were measured in the Rio Grande and the combined San Juan, Animas, Dolores, and San Miguel basins, at only 19% and 18% of average, respectively. While the highest percentages were measured in the Yampa and White basins, those totals were only 53% of average. For the water year, which is now eight months old, the statewide precipitation has decreased to 83% of average and all basins are reporting below average totals. The Colorado and South Platte basins are reporting the lowest water year percentages, both at only 77% of average. While the Rio Grande basin is reporting the highest water year percentage, it remains at only 95% of average.

Reservoir Storage

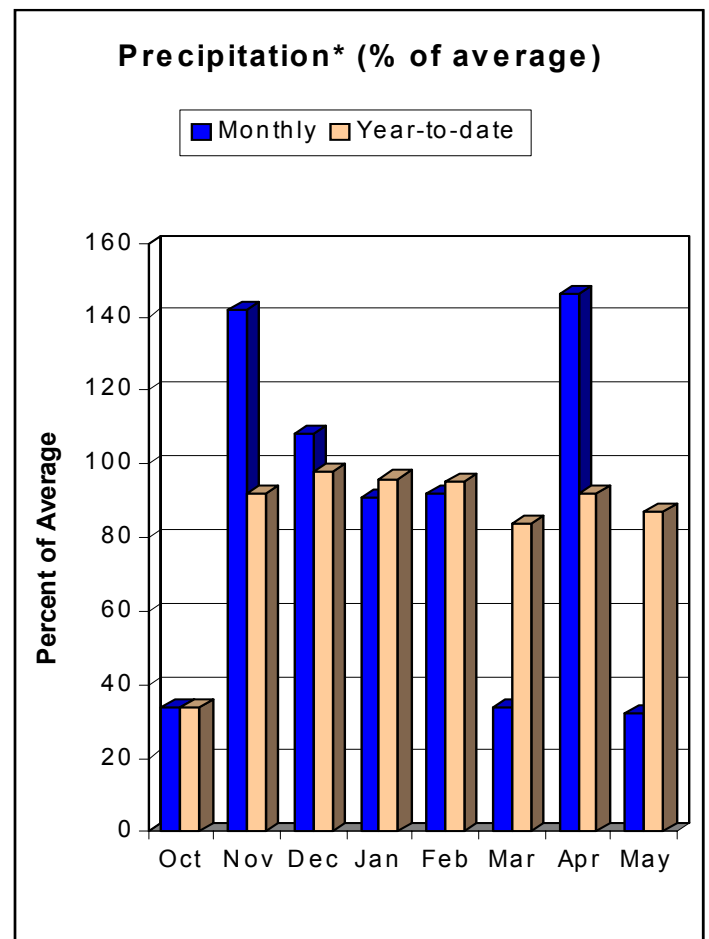
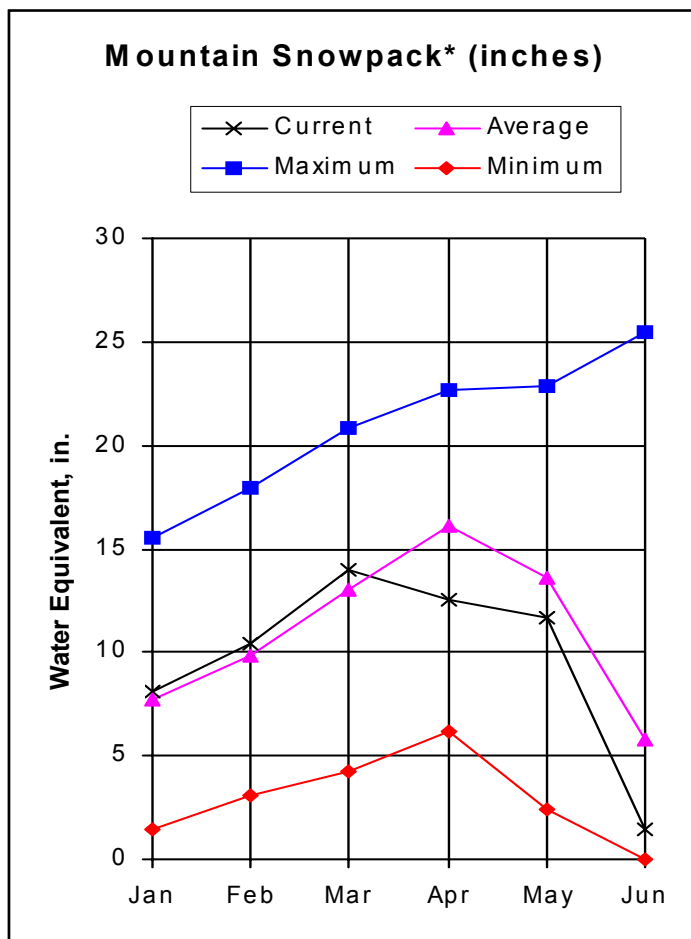
Reservoir storage volumes across Colorado continue to be generally below average, yet better than those of last year. Statewide storage is 85% of average and is 125% of last year's volumes. Those basins reporting the lowest storage volumes, as a percentage of average, are the Rio Grande at 49% of average, and the Arkansas at 56% of average. The Gunnison basin is the only basin reporting an above average volume at 109% of average. Early snow melt has produced good inflows across southwestern Colorado and the combined San Juan, Animas, Dolores, and San Miguel basins have improved to 98% of average. Although the current storage volumes are below average, these levels remain much better than the low point reached in 2002. Current storage totals are nearly two times those levels and are equivalent to nearly 1.5 million acre-feet. With this summer's heavy demand season just beginning, the current volumes will be significantly reduced as we enter the 2005 water year in October.

Streamflow

Colorado's below average snowpack, coupled with rapid snow melt and a dry May, is expected to produce below average runoff nearly statewide this summer. While the best outlook remains across those basins of southern Colorado, runoff forecasts drop significantly towards the basins of northern Colorado. Some of the lowest streamflow forecasts occur in the Colorado, Yampa, White, and North and South Platte basins. With May's continued dry conditions, forecasts in these basins further deteriorated this month and now a number of locations can expect less than 50% of average volumes this summer in these basins. While May's dry weather has taken a toll on streamflow forecasts across southern Colorado as well, these forecasts continue to be the best in the state. Forecasts in the Rio Grande basin show promise for stream flows of 80% to 90% of average along the major streams, and near average along some of the smaller tributaries.

GUNNISON RIVER BASIN

as of June 1, 2004



*Based on selected stations

Very rapid melting of the snowpack in the Gunnison Basin has driven the snow measurements from 77% of average on May 1, to only 26% of average on June 1. There is about 23% more snow in the basin this year than at the same time last year. Measurements range from 43% of average in the Surface Creek Watershed, to 23% of average in the Uncompahgre Watershed. Most of the measuring sites in the basin have completely melted out. The amount of precipitation during May was the lowest monthly accumulation this water year. There was only 32% of the average monthly amount, and the total water year accumulation up to June 1 is only 87% of average. Fortunately the reservoir storage in the basin continues to be above average, which is more than can be said for reservoir storage in the other basins in the state. The combined storage of the eight major reservoirs is 107% of average, which is 23% more than last year at this time. Streamflow forecasts throughout the basin have dropped significantly from last month. Flows at Grand Junction are now only 58% of average.

GUNNISON RIVER BASIN
Streamflow Forecasts - June 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Taylor River blw Taylor Park Resv	APR-JUL	38	53	63	61	73	88	103
Slate River nr Crested Butte	APR-JUL	50	56	60	67	64	70	89
East River at Almont	APR-JUL	90	111	125	65	139	160	192
Gunnison River nr Gunnison	APR-JUL	153	195	225	58	255	295	390
Tomichi Creek at Sargents	APR-JUL	15.0	17.6	18.5	58	22	26	32
Cochetopa Creek blw Rock Creek	APR-JUL	4.0	5.0	7.0	41	9.0	11.9	17.3
Tomichi Creek at Gunnison	APR-JUL	26	31	35	43	44	60	81
Lake Fork at Gateview	APR-JUL	65	83	95	75	107	125	126
Blue Mesa Reservoir Inflow	APR-JUL	325	390	425	59	495	595	720
Paonia Reservoir Inflow	MAR-JUN	44	48	52	52	59	70	100
	APR-JUL	38	44	48	47	52	59	102
N.F. Gunnison River nr Somerset	APR-JUL	146	165	185	61	206	239	305
Surface Creek nr Cedaredge	APR-JUL	8.0	9.4	10.2	60	11.8	14.7	17.1
Ridgway Reservoir Inflow	APR-JUL	64	73	80	78	88	100	102
Uncompahgre River at Colona	APR-JUL	72	88	100	72	113	133	139
Gunnison River nr Grand Junction	APR-JUL	795	860	900	58	1035	1245	1560

GUNNISON RIVER BASIN
Reservoir Storage (1000 AF) - End of May

GUNNISON RIVER BASIN
Watershed Snowpack Analysis - June 1, 2004

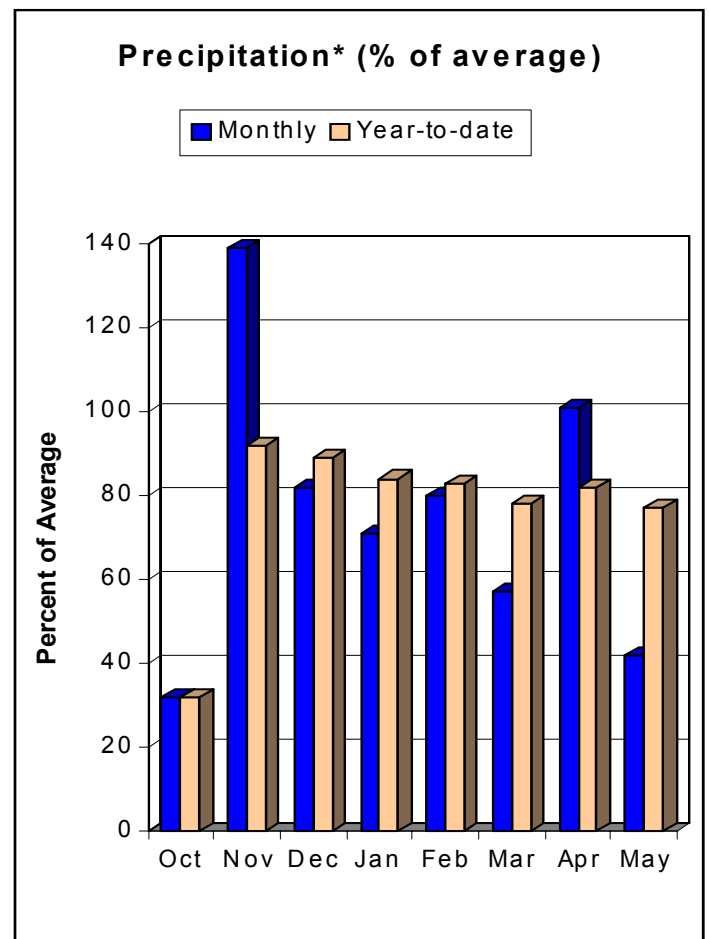
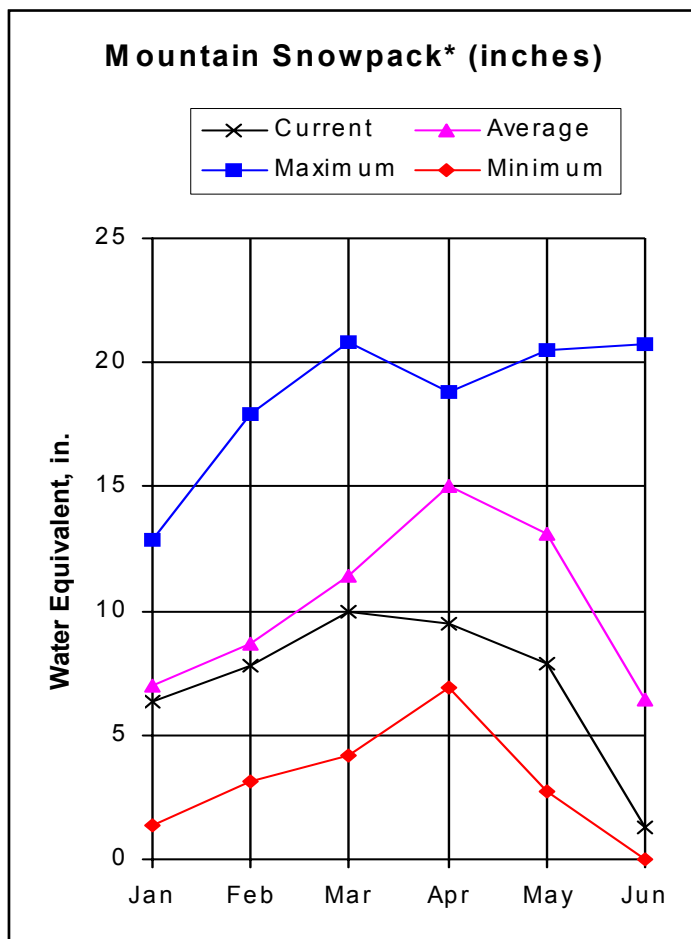
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BLUE MESA	830.0	564.1	410.5	517.1	UPPER GUNNISON BASIN	9	102	27
CRAWFORD	14.3	11.4	9.0	12.6	SURFACE CREEK BASIN	2	146	43
FRUITGROWERS	4.3	4.3	4.4	4.0	UNCOMPAHGRE BASIN	3	680	23
FRUITLAND	9.2	6.0	4.3	6.3	TOTAL GUNNISON RIVER BASIN	12	123	26
MORROW POINT	121.0	112.4	115.2	113.8				
PAONIA	18.0	15.4	16.4	15.7				
RIDGWAY	83.2	73.5	83.2	61.2				
TAYLOR PARK	106.0	90.4	52.5	71.8				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER COLORADO RIVER BASIN as of June 1, 2004



*Based on selected stations

The snowpack measurements in the Colorado Basin indicate that most of the measurable snow has melted. There is only 23% of the average amount of snow at the 26 automated SNOTEL locations throughout the basin. There is only 48% of the amount there was last year at this time. Measurements range from no measurable snow in the Muddy Creek and Willow Creek watersheds, to 43% of average amounts in the Plateau Creek Watershed. Precipitation during May was only 42% of average, which lowered the water year totals to only 77% of average. Despite the rapid snowmelt during May, reservoirs have not been able improve their storage volumes significantly. Currently the combined storage for the eight major reservoirs is only 86% of average, which is 3% of average less than last month. There is 39% more storage than last year at this time of year. Streamflow forecasts continue to deteriorate each month. Stream flows in the basin are expected to range from 50% to 60% of average, with less than 50% of average forecast in a number of the headwater tributaries.

UPPER COLORADO RIVER BASIN
Streamflow Forecasts - June 1, 2004

		<<===== Drier =====		Future Conditions		===== Wetter =====>>		
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Lake Granby Inflow	APR-JUL	102	109	115	51	121	130	225
Willow Creek Reservoir Inflow	APR-JUL	12.0	16.5	20	39	24	30	51
Williams Fork Reservoir inflow	APR-JUL	43	50	55	58	60	68	95
Dillon Reservoir Inflow	APR-JUL	52	69	80	48	91	108	167
Green Mountain Reservoir inflow	APR-JUL	125	143	155	55	168	188	280
Muddy Creek blw Wolford Mtn. Resv.	APR-JUL	18.3	21	23	38	25	29	60
Eagle River blw Gypsum	APR-JUL	150	170	185	55	201	228	335
Colorado River nr Dotsero	APR-JUL	505	650	675	47	790	960	1440
Ruedi Reservoir Inflow	APR-JUL	58	70	80	57	91	109	141
Roaring Fork at Glenwood Springs	APR-JUL	289	367	425	60	487	587	710
Colorado River nr Cameo	APR-JUL	920	1090	1180	49	1400	1720	2420

UPPER COLORADO RIVER BASIN
Reservoir Storage (1000 AF) - End of May

UPPER COLORADO RIVER BASIN
Watershed Snowpack Analysis - June 1, 2004

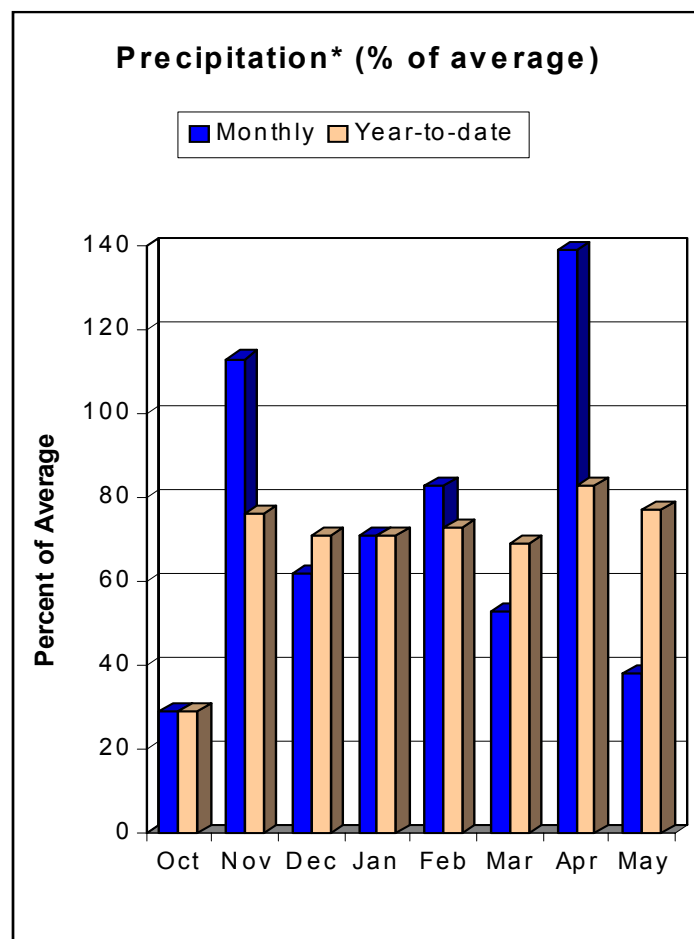
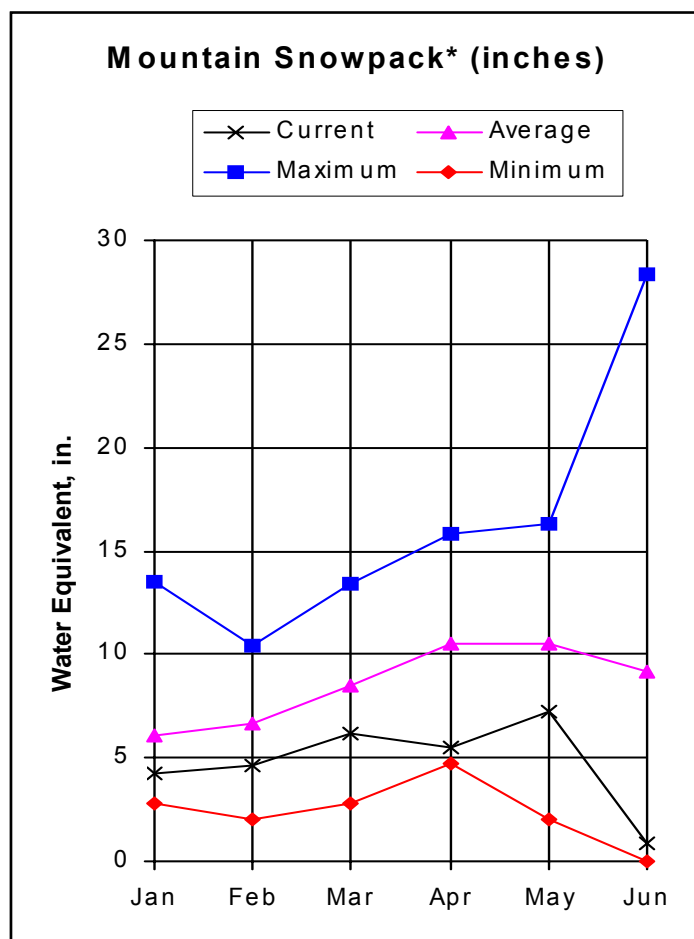
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DILLON	250.8	221.6	154.9	229.0	BLUE RIVER BASIN	5	58	22
LAKE GRANBY	465.6	178.5	117.5	302.9	UPPER COLORADO RIVER BASIN	19	36	19
GREEN MOUNTAIN	139.0	82.3	65.2	76.1	MUDDY CREEK BASIN	2	0	0
HOMESTAKE	43.0	21.8	24.9	20.3	PLATEAU CREEK BASIN	2	146	43
RUEDI	102.0	74.4	62.3	74.2	ROARING FORK BASIN	7	63	17
VEGA	32.0	33.7	30.6	29.2	WILLIAMS FORK BASIN	2	0	0
WILLIAMS FORK	96.8	72.8	33.1	63.6	WILLOW CREEK BASIN	2	0	0
WILLOW CREEK	9.0	6.4	8.4	7.4	TOTAL COLORADO RIVER BASIN	28	48	22

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTH PLATTE RIVER BASIN as of June 1, 2004



*Based on selected stations

Very rapid melting during May has nearly depleted most of the measurable snowpack in the South Platte Basin. The snowpack measurements have decreased from 65% of average on May 1, to only 13% of average on June 1. There is only 21% of the amount of snow in the basin there was last year at this same time. Measurements range from no measurable snow in the Upper South Platte Watershed, to 30% of average in the Boulder Creek Watershed. Demonstrating how extremely Colorado's climate can shift over a short period of time, May's monthly precipitation was only 38% of average, which was the second lowest monthly amount this water year, and quite a contrast to the 139% of average monthly amount during April. Despite rapid snow melt, reservoir storage is only 77% of average. The amount is 9% above last year's volumes on this date. Streamflow forecasts range from only about 35% of average along the upper reaches of the South Platte River to nearly 70% of average along the tributary streams of the northern Front Range.

SOUTH PLATTE RIVER BASIN
Streamflow Forecasts - June 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
		Chance Of Exceeding *					30-Yr Avg.	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	(1000AF)
Antero Reservoir inflow	APR-JUL	2.1	3.1	3.9	22	5.0	7.1	17.5
Spinney Mountain Reservoir inflow	APR-JUL	12.8	16.5	19.7	35	24	30	57
Elevenmile Canyon Reservoir inflow	APR-JUL	5.9	13.1	18.0	31	23	30	59
Cheesman Lake inflow	APR-JUL	29	35	40	35	46	56	114
South Platte River at South Platte	APR-SEP	61	102	130	51	158	199	254
Bear Creek abv Evergreen	JUN-SEP	4.3	6.0	7.6	48	9.6	13.6	16.0
Bear Creek at Morrison	JUN-SEP	3.8	5.5	7.1	40	9.2	13.4	17.7
Clear Creek at Golden	APR-SEP	51	64	73	55	82	95	134
St. Vrain Creek at Lyons	APR-SEP	36	48	56	67	64	76	84
Boulder Creek nr Orodell	APR-SEP	31	34	37	70	40	43	53
South Boulder nr Eldorado Spgs	APR-SEP	20	27	31	68	35	42	46
Big Thompson River at mouth nr Drake	APR-SEP	61	73	81	69	89	101	117
CACHE LAPOUDRE at Canyon Mouth	APR-SEP	126	164	190	69	215	255	275

SOUTH PLATTE RIVER BASIN
Reservoir Storage (1000 AF) - End of May

SOUTH PLATTE RIVER BASIN
Watershed Snowpack Analysis - June 1, 2004

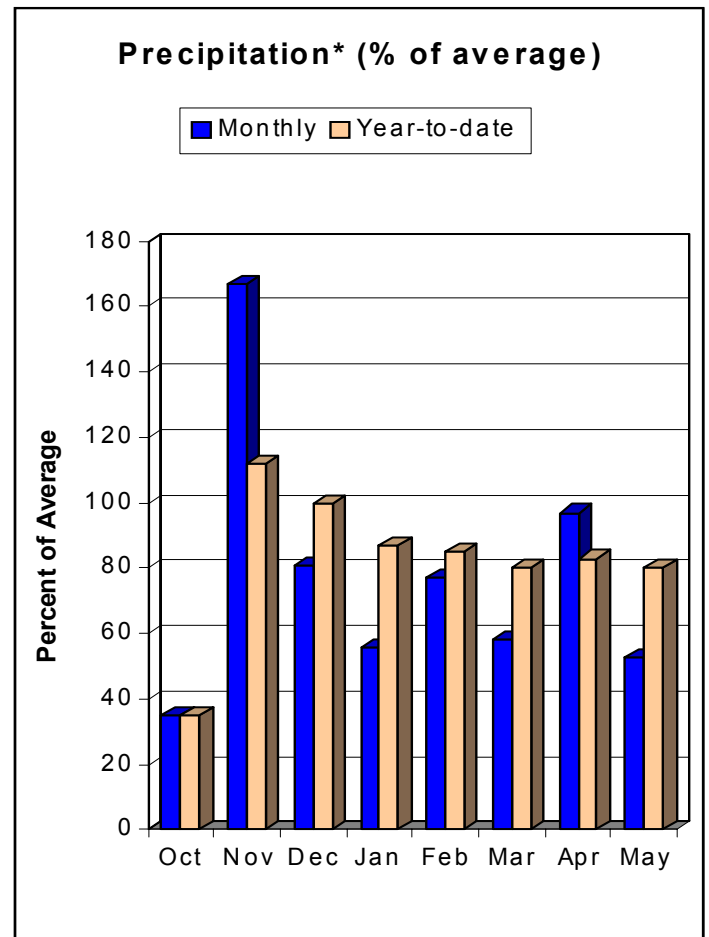
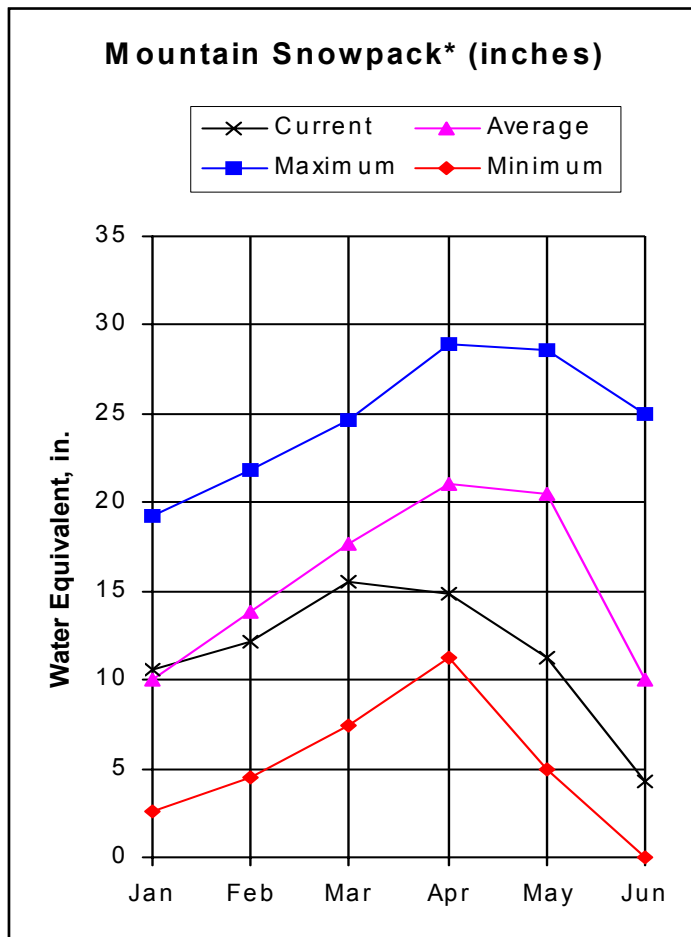
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ANTERO	20.0	1.0	0.0	16.0	BIG THOMPSON BASIN	3	3	2
BARR LAKE	32.0	20.0	31.0	27.7	BOULDER CREEK BASIN	3	66	30
BLACK HOLLOW	8.0	2.7	3.0	4.4	CACHE LA POUDRE BASIN	2	29	29
BOYD LAKE	49.0	27.2	18.9	40.0	CLEAR CREEK BASIN	2	10	5
CACHE LA POUDRE	10.0	5.2	9.0	9.1	SAINT VRAIN BASIN	1	0	0
CARTER	108.9	75.2	92.4	100.2	UPPER SOUTH PLATTE BASIN	6	0	0
CHAMBERS LAKE	9.0	3.5	6.0	5.8	TOTAL SOUTH PLATTE BASIN	17	21	13
CHEESMAN	79.0	66.6	60.0	66.2				
COBB LAKE	34.0	5.0	4.0	14.7				
ELEVEN MILE	97.8	79.4	46.1	97.1				
EMPIRE	38.0	14.9	19.1	30.7				
FOSSIL CREEK	12.0	6.0	8.2	8.0				
GROSS	41.8	22.2	18.6	28.8				
HALLIGAN	6.4	6.2	6.4	6.0				
HORSECREEK	16.0	0.0	14.4	14.1				
HORSETOOTH	149.7	138.3	32.8	123.2				
JACKSON	35.0	22.2	24.2	30.6				
JULESBURG	28.0	17.5	18.6	21.5				
LAKE LOVELAND	14.0	12.1	12.1	11.0				
LONE TREE	9.0	8.9	8.7	8.6				
MARIANO	6.0	2.3	5.6	5.4				
MARSHALL	10.0	8.2	9.6	8.2				
MARSTON	13.0	5.2	19.3	15.3				
MILTON	24.0	18.0	21.7	19.3				
POINT OF ROCKS	70.0	45.0	55.8	66.3				
PREWITT	33.0	6.7	19.4	26.7				
RIVERSIDE	63.1	34.3	44.7	56.0				
SPINNEY MOUNTAIN	48.7	20.9	12.9	35.6				
STANDLEY	42.0	41.2	35.4	36.8				
TERRY LAKE	8.0	6.0	6.8	7.0				
UNION	13.0	9.8	9.6	12.2				
WINDSOR	19.0	9.3	8.3	15.0				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS as of June 1, 2004



*Based on selected stations

At this time it appears that the measurable snowpack in these basins will be gone about a month ahead of the average melt out date. Low accumulation amounts all winter, combined with a dry, warm spring have contributed to June 1 snow measurements that are only 40% of average in the North Platte Basin, and only 36% of average in the Yampa and White basins. The amount in the North Platte Basin is similar to last year at this time, while the amount in the Yampa and White basins is about 29% higher than last year. Monthly precipitation in these basins was below average for the sixth straight month. Precipitation measurements were only 53% of average during May, and the water year total is only 80% of average. Combined reservoir storage for the two main reservoirs in these basins has dropped significantly below average for the first time this water year, at only 92%. Runoff forecasts throughout these basins call for well below average volumes this summer. Most forecast values of only about 50% of the normal along most of the streams for the 2004 runoff season.

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS
Streamflow Forecasts - June 1, 2004

		<<===== Drier =====		Future Conditions		===== Wetter =====>>		
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
NORTH PLATTE RIVER nr Northgate	JUN-SEP	20	40	53	33	66	86	159
LARAMIE RIVER nr Woods	JUN-SEP	14.8	32	44	49	56	73	89
Yampa R abv Stagecoach Res	APR-JUL	9.9	11.3	13.0	45	18.6	25	29
Yampa River at Steamboat Springs	APR-JUL	126	140	155	55	169	194	280
Elk River nr Milner	APR-JUL	163	179	190	59	209	239	325
Elkhead Creek nr Elkhead	APR-JUL	11.2	13.8	16.0	41	18.5	23	39
ELKHEAD CREEK blw Maynard Gulch	APR-JUL	30	31	32	54	39	49	59
Fortification Ck nr Fortification	MAR-JUN	3.00	3.10	3.30	44	4.30	5.90	7.50
Yampa River nr Maybell	APR-JUL	395	460	525	53	590	685	990
Little Snake River nr Slater	APR-JUL	64	74	88	55	103	128	159
LITTLE SNAKE R nr Dixon	APR-JUL	116	133	175	53	218	278	330
LITTLE SNAKE R nr Lily	APR-JUL	120	136	180	49	223	288	365
White River nr Meeker	APR-JUL	131	142	160	55	180	213	290

YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS Reservoir Storage (1000 AF) - End of May					YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS Watershed Snowpack Analysis - June 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
STAGECOACH	33.3	27.7	33.0	29.9	LARAMIE RIVER BASIN	2	37	24
YAMCOLO	9.1	7.0	5.9	7.7	NORTH PLATTE RIVER BASIN	7	123	44
					TOTAL NORTH PLATTE BASIN	9	100	40
					ELK RIVER BASIN	2	0	0
					YAMPA RIVER BASIN	9	151	31
					WHITE RIVER BASIN	4	75	52
					TOTAL YAMPA AND WHITE RIV	12	129	36
					LITTLE SNAKE RIVER BASIN	6	75	48

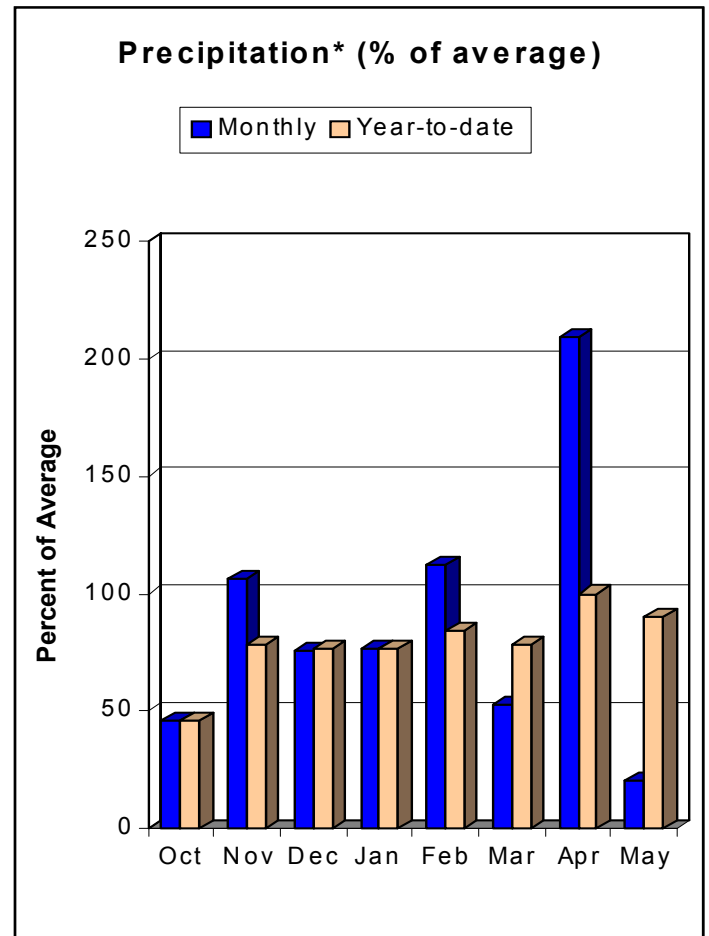
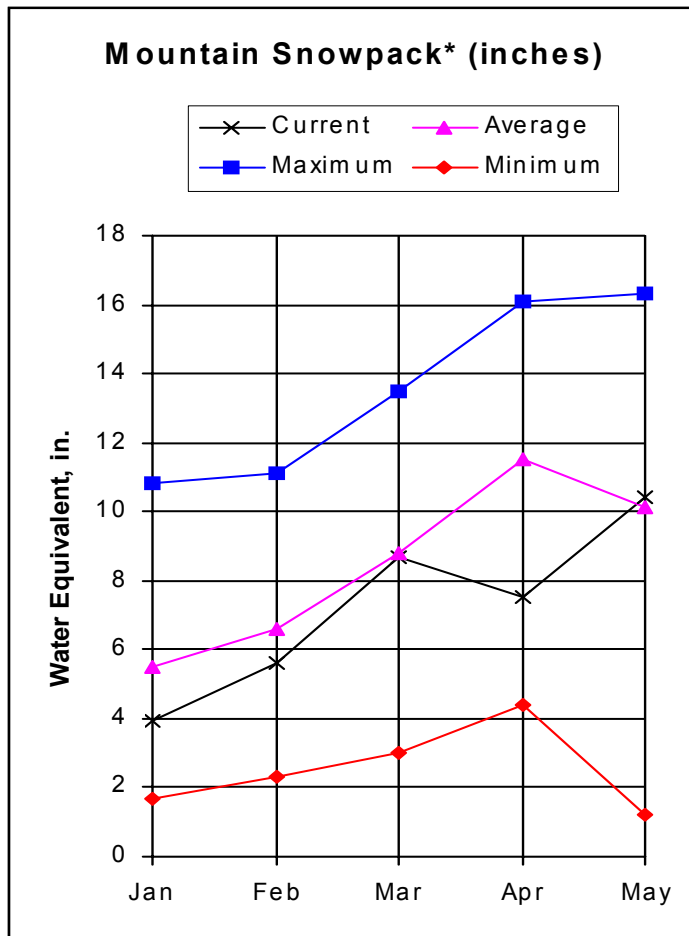
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The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

ARKANSAS RIVER BASIN

as of June 1, 2004



*Based on selected stations

After the very wet April that boosted snowpack measurements to near average levels on May 1 in the Arkansas Basin, warm, extremely dry conditions during May have reduced the snowpack measurements to only 23% of average on June 1. Most of the watersheds in the basin have no measurable snow remaining. The Upper Arkansas Watershed is the only watershed with measurable snow and its measurement is only 29% of average. After the Arkansas Basin recorded the highest monthly percent of average precipitation in the state in April with 209% of the monthly average, the May monthly accumulation was only 21% of average. The water year total is now only 90% of average. Reservoir storage has only benefited slightly from the rapid snow melt in the basin. Storage levels have gone from 53% of average on May 1, to 56% of average on June 1. There is 39% more storage than last year at this time. Runoff forecasts are best, as a percent of normal, along the southern tributaries of the Arkansas River. Towards the northern tributaries, forecasted runoff drops to only about 70% of average.

ARKANSAS RIVER BASIN
Streamflow Forecasts - June 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)		Chance Of Exceeding *		30% (1000AF)		
		70% (1000AF)		50% (Most Probable) (1000AF) (% AVG.)		10% (1000AF)		
Chalk Creek nr Nathrop	APR-SEP	11.1	15.5	20	74	25	31	27
Arkansas River at Salida	APR-SEP	180	220	245	79	270	310	310
Grape Creek nr Westcliffe	APR-SEP	6.9	11.7	15.0	77	18.3	23	19.6
Pueblo Reservoir Inflow	APR-SEP	210	265	300	70	335	390	430
Huerfano River nr Redwing	APR-SEP	9.0	11.0	12.0	77	13.0	15.0	15.5
Cucharas River nr La Veta	APR-SEP	8.9	9.6	10.5	81	12.7	15.9	13.0
Trinidad Lake Inflow	APR-SEP	38	42	45	102	53	64	44

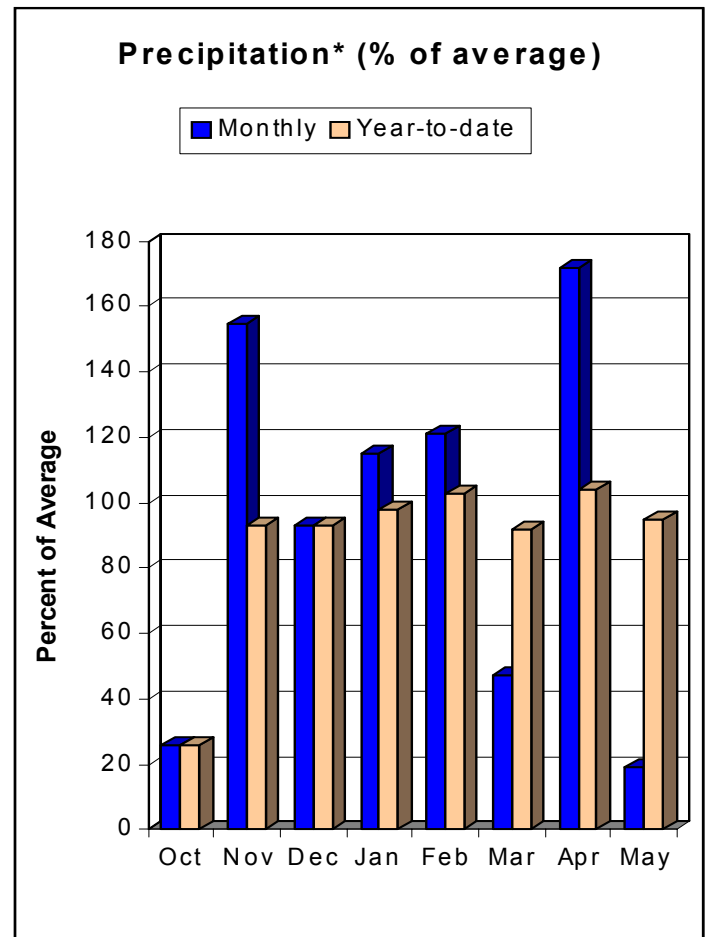
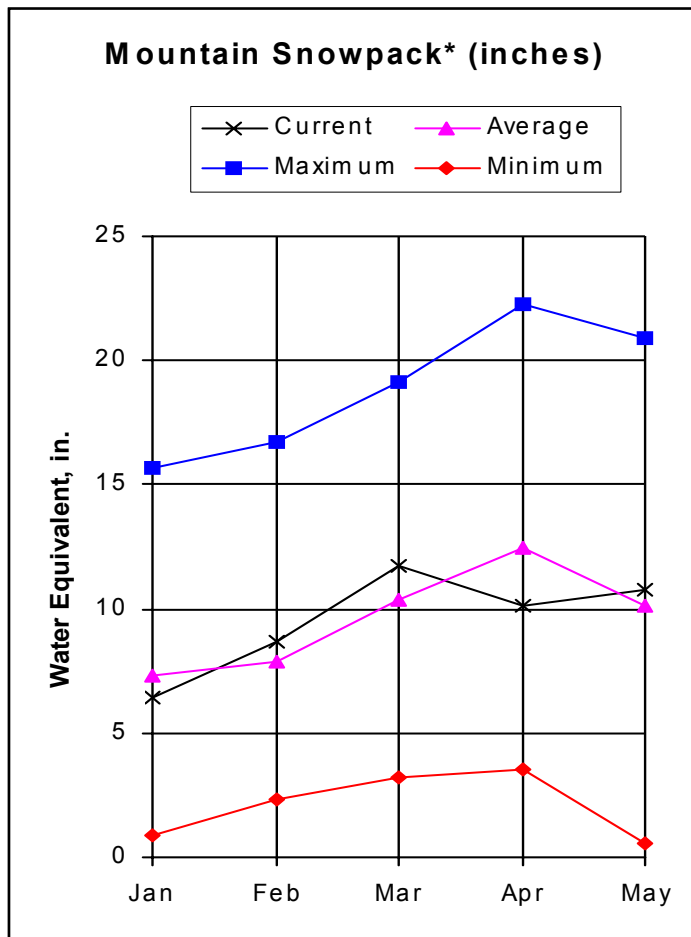
ARKANSAS RIVER BASIN Reservoir Storage (1000 AF) - End of May					ARKANSAS RIVER BASIN Watershed Snowpack Analysis - June 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ADOBE	70.0	0.0	0.0	33.0	UPPER ARKANSAS BASIN	3	63	29
CLEAR CREEK	11.0	8.3	8.6	6.3	CUCHARAS & HUERFANO RIVER	2	0	0
GREAT PLAINS	150.0	0.0	0.0	39.3	PURGATOIRE RIVER BASIN	2	0	0
HOLBROOK	7.0	0.0	0.6	4.1	TOTAL ARKANSAS RIVER BASIN	6	63	23
HORSE CREEK	28.0	11.5	0.0	10.0				
JOHN MARTIN	335.7	6.6	29.6	128.1				
LAKE HENRY	8.0	5.1	3.1	5.7				
MEREDITH	42.0	17.7	3.8	18.5				
PUEBLO	236.7	100.2	89.4	160.1				
TRINIDAD	72.3	29.6	16.1	29.7				
TURQUOISE	126.6	81.1	35.6	77.6				
TWIN LAKES	86.0	51.4	36.6	42.6				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER RIO GRANDE BASIN as of June 1, 2004



*Based on selected stations

Extremely rapid melting of the snowpack during May has not left much measurable snow in the Rio Grande Basin. Only the Wolf Creek Summit SNOTEL has measurable amounts left and that one measurement makes the basin wide snowpack amount to be only 37% of average on June 1, which is a whopping 65% of average drop from last month. On the up side, there is 214% of the amount there was last year at this time. May's precipitation was the lowest monthly accumulation this water year, at only 19% of average. The water year totals are 95% of average on June 1. Despite the abundant snow melt during May, the reservoirs in the basin have yet to benefit significantly, and the storage levels remain very much below average at only 49%. There is 15% more storage than last year at this time. Runoff forecasts call for generally below average volumes for this year. Although this basin is in the best shape of any across the state, forecasts have dropped to a general range of 85% to 95% of average at most locations.

UPPER RIO GRANDE BASIN
Streamflow Forecasts - June 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Rio Grande at Thirty Mile Bridge	APR-SEP	105	112	116	85	121	128	136
Rio Grande Reservoir Inflow	APR-JUL	87	94	99	84	104	112	118
Rio Grande at Wagon Wheel Gap	APR-SEP	250	275	290	84	305	330	345
South Fork Rio Grande at South Fork	APR-SEP	106	114	120	91	126	134	132
Rio Grande nr Del Norte	APR-SEP	385	420	445	84	470	505	531
Saguache Creek nr Saguache	APR-SEP	16.5	20	25	76	30	36	33
Alamosa Creek abv Terrace Reservoir	APR-SEP	50	58	64	91	70	78	70
La Jara Creek nr Capulin	MAR-JUL	4.40	6.70	8.30	95	9.90	12.20	8.70
Trinchera Creek	APR-SEP	5.9	8.3	9.9	83	11.5	13.9	12.0
Sangre de Cristo Creek	APR-SEP	4.34	7.29	9.30	106	11.31	14.22	8.80
Ute Creek	APR-SEP	6.2	8.5	10.1	83	11.7	14.0	12.2
Platoro Reservoir Inflow	APR-JUL	45	50	54	84	58	63	64
	APR-SEP	51	57	61	86	65	71	71
Conejos River nr Mogote	APR-SEP	137	155	167	84	177	197	200
San Antonio River at Ortiz	APR-SEP	10.5	10.8	11.0	67	13.0	16.1	16.4
Los Pinos River nr Ortiz	APR-SEP	50	56	61	82	66	72	74
Culebra Creek at San Luis	APR-SEP	14.0	19.0	23	100	27	32	23
Costilla Reservoir inflow	MAR-JUL	7.1	7.6	8.6	81	9.6	11.0	10.6
Costilla Creek nr Costilla	MAR-JUL	16.9	19.0	21	81	23	27	26

UPPER RIO GRANDE BASIN
Reservoir Storage (1000 AF) - End of May

UPPER RIO GRANDE BASIN
Watershed Snowpack Analysis - June 1, 2004

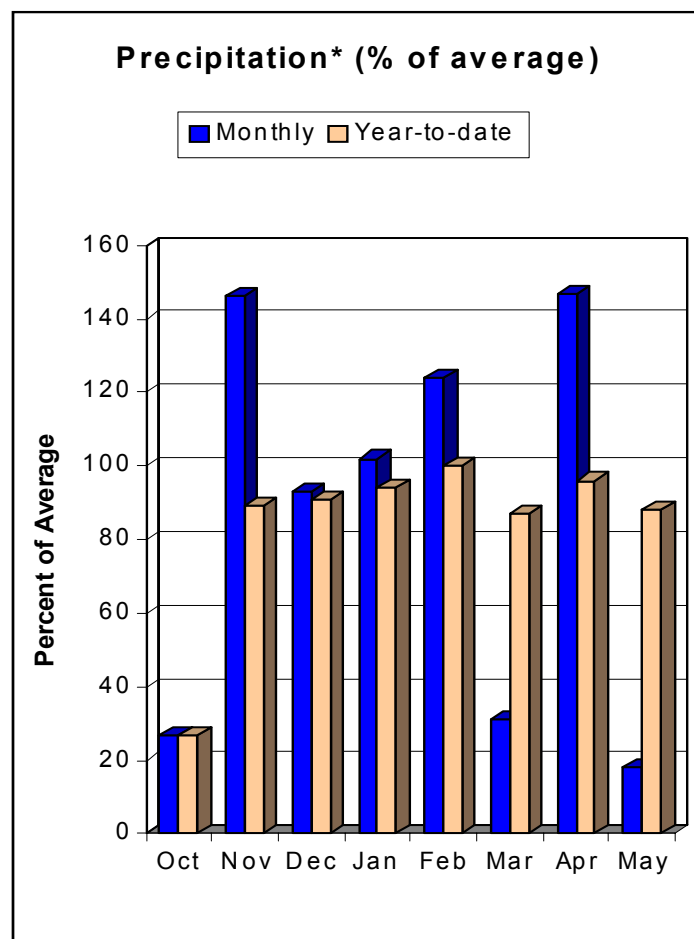
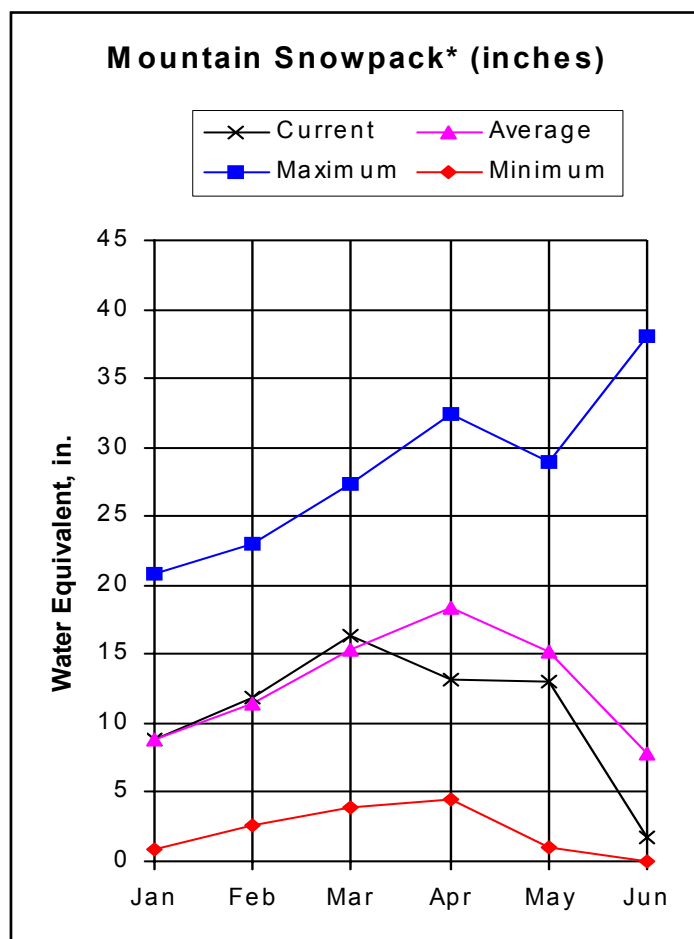
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CONTINENTAL	15.0	6.1	1.2	8.2	ALAMOSA CREEK BASIN	1	0	0
PLATORO	53.7	8.5	8.2	24.5	CONEJOS & RIO SAN ANTONIO	2	0	0
RIO GRANDE	51.0	9.4	14.4	24.2	CULEBRA & TRINCHERA CREEK	3	0	0
SANCHEZ	103.0	16.5	12.0	26.9	UPPER RIO GRANDE BASIN	4	214	41
SANTA MARIA	45.0	3.6	4.2	11.4	TOTAL UPPER RIO GRANDE BA	10	214	37
TERRACE	13.1	6.6	4.2	8.0				

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS as of June 1, 2004



*Based on selected stations

Extremely warm and dry conditions in these basins have spurred rapid snow melt during May, and have reduced most of the measurable snow to zero. While snowpack measurements were 85% of average on May 1, they are only 26% of average on June 1. Only three of 16 automated SNOTEL measuring sites have snow remaining at them. Measurements range from no snow in the Dolores and San Miguel basins, to 48% of average in the San Juan Basin. Monthly precipitation was only 18% of average during May, which is quite a contrast to the 147% of average during April. The water year total is 88% of average. The six major reservoirs in these basins have benefited from the recent snowmelt, and their combined storage is now 98% of average, which is 13% of average higher than last month. There is 29% more storage than last year at this time. Streamflow forecasts in these basins have steadily dropped each month since March 1, when near average flows were forecast. Runoff forecasts now range from only about 65% to 85% of average in these basins.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Streamflow Forecasts - June 1, 2004

		<<===== Drier =====		Future Conditions		===== Wetter =====>>			
Forecast Point	Forecast Period	=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)		
Dolores River at Dolores	APR-JUL	146	157	170	64	183	200	265	
McPhee Reservoir inflow	APR-JUL	170	179	195	61	208	233	320	
San Miguel River nr Placerville	APR-JUL	75	87	95	72	103	115	132	
Gurley Reservoir Inlet	JUN-JUL	0.58	1.66	2.40	40	3.14	4.22	6.00	
	JUNE			2.10	45			4.67	
	JULY			0.33	25			1.32	
Cone Reservoir Inlet	JUN-JUL	0.14	0.29	0.60	42	0.92	1.38	1.43	
	JUNE			0.50	48			1.04	
	JULY			0.10	26			0.38	
Lilylands Reservoir Inlet	JUN-JUL	0.13	0.37	0.53	47	0.69	0.93	1.14	
	JUNE			0.43	49			0.87	
	JULY			0.10	37			0.27	
Rio Blanco at Blanco Diversion	APR-JUL	28	36	41	77	46	54	53	
Navajo River at Oso Diversion	APR-JUL	36	46	53	77	60	70	69	
San Juan River nr Carracus	APR-JUL	200	232	270	67	311	377	405	
Piedra River nr Arboles	APR-JUL	154	169	180	78	191	206	230	
Vallecito Reservoir Inflow	APR-JUL	92	129	165	81	200	240	205	
Navajo Reservoir Inflow	APR-JUL	330	440	550	69	665	775	800	
Animas River at Durango	APR-JUL	215	275	330	75	385	445	440	
Lemon Reservoir Inflow	APR-JUL	38	46	51	88	56	64	58	
La Plata River at Hesperus	APR-JUL	13.8	15.0	16.0	64	18.4	22	25	
Mancos River nr Mancos	APR-JUL	18.0	22	26	65	32	40	40	
	JUNE			7.0	51			13.7	
	JULY			2.00	44			4.60	

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Reservoir Storage (1000 AF) - End of May

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS
Watershed Snowpack Analysis - June 1, 2004

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
GROUNDHOG	21.7	14.8	8.7	18.9	ANIMAS RIVER BASIN	7	1157	14
JACKSON GULCH	10.0	10.0	9.6	9.3	DOLORES RIVER BASIN	4	0	0
LEMON	40.0	34.5	19.7	29.2	SAN MIGUEL RIVER BASIN	3	0	0
MCPHEE	381.2	295.4	242.8	328.0	SAN JUAN RIVER BASIN	3	214	48
NARRAGUINNEP	19.0	14.3	18.8	17.4	TOTAL SAN MIGUEL, DOLORES	16	277	26
VALLECITO	126.0	118.0	79.1	93.9	AND JUAN RIVER BASINS			

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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In addition to the basin outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through May. The information may be obtained from the National Resources Conservation Service web page at <http://www.wcc.nrcs.usda.gov/water/quantity/westwide.html>.

Issued by

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Basin Outlook Report
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